

# SMD Multilayer Ferrite Chip Beads – GMLB-100505 UP Series

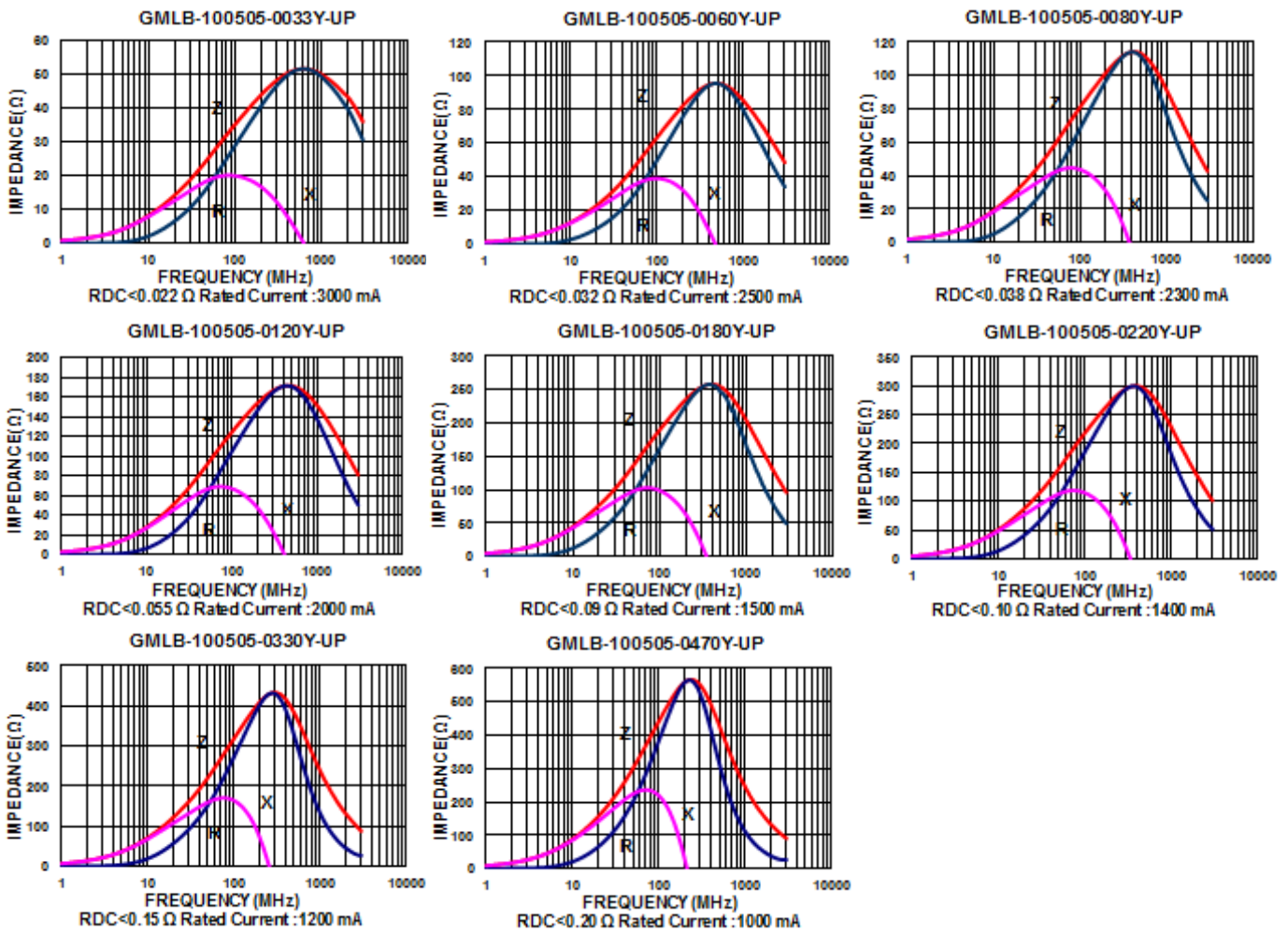
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (mA) Max
GMLB-100505-0033Y-UP	33	100	0.022	3000
GMLB-100505-0060Y-UP	60	100	0.032	2500
GMLB-100505-0080Y-UP	80	100	0.038	2300
GMLB-100505-0120Y-UP	120	100	0.055	2000
GMLB-100505-0180Y-UP	180	100	0.090	1500
GMLB-100505-0220Y-UP	220	100	0.100	1400
GMLB-100505-0330Y-UP	330	100	0.150	1200
GMLB-100505-0470Y-UP	470	100	0.200	1000

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C (Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



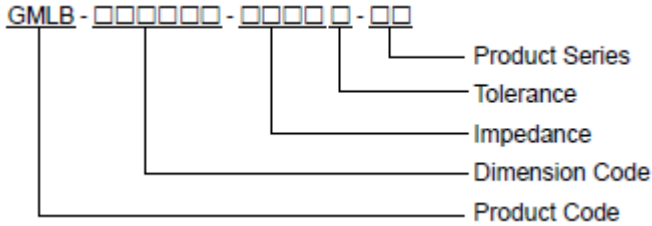
## Multilayer Ferrite Chip Beads



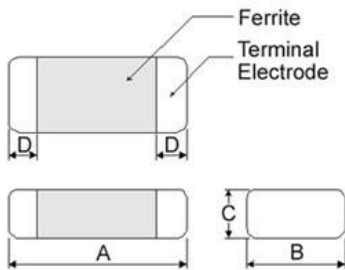
Mag.Layers offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions.

These ferrite formulas are used to compose seven types of EMI suppression chip beads: SY, BK, SJ, GK, PY, UP, NQ, FY, FJ and HV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3

① : SY / SJ / NQ / PY

② : SY / SJ / NQ / PY / UP / FY / FJ

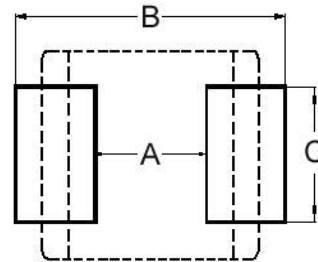
③ : UP ④ : BK / SJ / GK / PY / NQ / UP / HV

⑤ : BK / GK / PY / UP ⑥ : SY / BK / PY / UP

### Dimension Conversion

Code	Dimension in mm (AxBxC)	EIA
060303	0.6x0.3x0.3	0201
100505	1.0x0.5x0.5	0402
160805	1.6x0.8x0.5	0603
160808	1.6x0.8x0.8	0603
201209	2.0x1.2x0.9	0805
321611	3.2x1.6x1.1	1206

### Recommended Pattern



Dimensions in mm

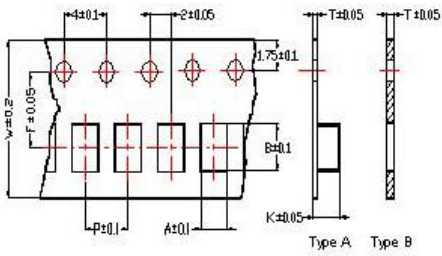
TYPE	A	B	C
①060303	0.2 ~ 0.3	0.75 ~ 1.05	0.3
②100505	0.4	1.2 ~ 1.4	0.5
③160805	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
④160808	0.7 ~ 0.8	1.8 ~ 2.0	0.6 ~ 0.8
⑤201209	1.0 ~ 1.2	2.6 ~ 4.0	1.0 ~ 1.2
⑥321611	2.0	4.2 ~ 5.2	1.2

\* Don't apply narrower pattern than listed above to PY and UP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads

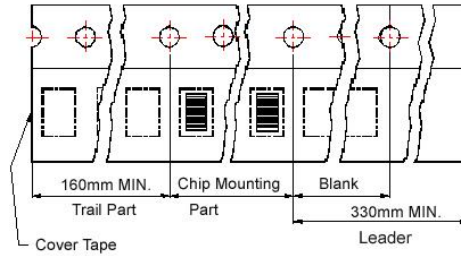
## Packaging Specifications

### Tape Dimensions

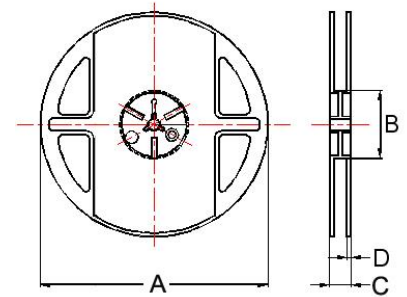


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : SY/SJ/NQ/PY    ③ : UP
- ② : SY/SJ/NQ/PY/UP/FY/FJ
- ④ : BK/SJ/GK/PY/NQ/UP/HV
- ⑤ : BK/GK/PY/UP
- ⑥ : SY/BK/PY/UP
- ⑦ : PY/UP

### Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	1.5	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	1.5	10000
③160805	1.05	1.85	0.60	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
⑤201209	1.50	2.30	0.97	8.0	4.0	3.5	-	B	178	60	12	1.5	4000
⑥321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A	178	60	12	1.5	3000
⑦453215	3.66	4.95	0.24	12	8.0	5.5	1.85	A	178	60	16	1.4	1000